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| REV: A | ENGINEERING DATA REQUIREMENTS (ATTACHMENT "A") | |
| NOTE: MILITARY SPECIFICATIONS /STANDARDS WILL NOT BE FURNISHED IN THE BID SET. | | |
| 1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF | | |
| PISTON, NLG ASSY OF T-38 Acft | | |
| 2. PART NUMBER | 3. NATIONAL STOCK NUMBER | |
| 3-41606-3 | 1620-00-949-0417 LE | |
| 4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED. | | |
| 5. Markings and Identification per MIL-STD-130 in lieu of IM-8 and MA-19.9. | | |
| 6. Dimensions & Tolerances per ASME Y14.5 in Lieu of 10Y201, 20Y201 & 3-40500. | | |
| 7. Safety Procedures Per NASM20995 and NASM33540 in Lieu of FH-12. | | |
| 8. Install Bolts, Screw, Washers, Pins, Etc. per best shop procedure in Lieu of FH-11 and FH-12. | | |
| 9. Aircraft lubricant per MIL-HDBK-838 in Lieu of L-3. | | |
| 10. Surface Roughness per ANSI B46.1 in Lieu of MIL-STD-10. | | |
| 11. Cadmium Plate per SAE-AMS-QQ-P-416A Type II, Class 3 in Lieu of FP-2. | | |
| 12. Heat Treat per SAE AMS-H6875 in Lieu of HT-3.2. | | |
| 13. Solid Film Lubricant per MIL-L-46010 Type 1 or MIL-L-23398 in Lieu of MA1115 and L-6. | | |
| 14. Threads per MIL-S8879, Safety Critical, in Lieu of FH-32. | | |
| 15. Perform Magnetic Particle inspection per ASTM E 1444 in Lieu of MIL-I-6868 and IT-32.3 . Use full wave direct current (FWDC). Wet continuous method, Fluorescent Type with the following acceptance/rejection Criteria: <u>NO DEFECTS ALLOWED</u> . The intent of <u>NO DEFECTS ALLOWED</u> is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a level III as specified in NAS-410. | | |
| 16. Perform Fluorescent penetrant inspection per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of MIL-I-6866 and IT-32.1 with the following Acceptance/Rejection Criteria: <u>NO DEFECTS ALLOWED</u> . The intent of <u>NO DEFECTS ALLOWED</u> is that the inspection is conducted at the required Sensitivity Level and there shall be no indications allowed. The inspector performing the inspection shall be certified to Level II with the inspection procedure developed by a Level III as specified in NAS-410. | | |
| 17. Chrome Plate Per MIL-STD-1907. Type 1 Class 2 in Lieu of FP-6.1. | | |
| 18. Shot Peen per SAE AMS-S-13165 in Lieu of MA-57. | | |
| 19. After contract award, the successful bidder shall provide a copy of the processing documentation (Routing Documents and Process Specifications) To LGHEL for Final Review before production begins. | | |
| PREPARED BY | SYMBOL | DATE |
| SANDI L. FIELD | LGMPM | 20040107 |

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| PART NUMBER 3-41606-3 | NATIONAL STOCK NUMBER 1620-00-949-0417 LE | |
| <p>20. OO-ALC/LGHLEN System Engineering retains all right to review and accept Material Review Board (MRB's) Dispositions prior to shipment of Discrepant item. All Deviations, Minor and Major, From the Engineering Drawing Package shall be submitted for MRB Disposition.</p> <p>21. Prior to contract award, the Contractor shall certify to the Government in writing full compliance with Manuals, Specifications and Standards called out and required for the Manufacture of this contracted landing Gear Component/Assembly. Contractor is responsible to completely search these Manuals, Specifications and Standards and fully understand the requirements necessary to manufacture Landing Gear Components. Any Questions can be forwarded to OO-ALC/LGHLE.</p> <p>22. Apply a Thin Uniform Coating of Primer per MIL-PRF-23377 or MIL-PRF-85582 (After CADMIUM PLATING) to all Bushing Bores and allow to fully cure prior to installation of Bushing (Primer Shall Not Obstruct Grease Passages).</p> <p>23. Per Flag Note 8, Drawing 2007302, install bushings per the following in Lieu of MM5743:</p> <p style="margin-left: 40px;">A. The Bushing Installations shall e accomplished in such a manner as to avoid damage to the finish on the I.D. of the Housing into which the bushing is installed, or the finish of the bushing. Forced installation of Sub-Zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic Hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.</p> <p style="margin-left: 40px;">B. Prior to Bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.</p> <p style="margin-left: 40px;">C. Liquid Nitrogen shall be used for all Sub-Zero installations unless some other Sub-Zero coolant is specified and approved by OO-ALC/LGHEL Engeering. The soak time of the bushing in the Liquid Nitrogen shall be Sufficient to allow the bushing to reach the same temperature as the coolant.</p> <p style="margin-left: 40px;">D. The Bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trail runs shall be accomplished as necessary to minimize installation time which should be in order of about seven (7) seconds maximum.</p> <p style="margin-left: 40px;">E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process will not have Paint, Sealant or other Organic Material Applied prior to Heating. The parts shall be heated by the use of Radiant Heat Techniques, such as Thermal Blankets, Infrared Lamps ETC.; To the maximum temperature of 250F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling, oxidation or corrosion shall be permitted.</p> <p style="margin-left: 40px;">F. Bushings without Flanges shall be installed into Housing Bore which has received a light coat of Sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of Both Ends of the Bushing.</p> <p style="margin-left: 40px;">G. Bushings with Flanges shall be installed in a similar Manner as paragrahp (F) except Sealant shall also be applied to Face of Lug under Flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside faace of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange. Wipe off any excess sealant from other end of bushing also.</p> <p style="margin-left: 40px;">H. For Bushings with external Grease Grooves, the inside of the Lug will be coated with MIL-C-16173 prior to bushing installation and face of Lug will be coated with MIL-PRF-81733 per paragraph G, if bushing is flanged.</p> | | |
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| <p>24. For Parts Heat-Treated to 180 KSI and above, any Surface Ground/Machined after Heat Treat shall be inspected for abusive grinding/machining Burns per MIL-STD-867. Grinding shall be per MIL-STD-866.</p> <p>25. The Forging Shall be procured from the Original Forging Source, using the Original Certified Forging Procedures and Dies/Tooling.</p> <p>A. Prior to Contract Award, The Detailed Part Bidder shall provide Certification from the Forging Source, to the Government that the Certified Dies and Procedures are available and the Forging Source has an agreement with the Detail Parts Bidder to provide Forgings for their use in the event they are the successful Bidder.</p> <p>B. Prior to Production, Forging Lot Qualification shall be accomplished as specified on the Forging Drawing and SAE AMS-F-7190 for Steel Forgings and Sae AMS-A-22771 for Aluminum Forgings. The Detailed Part Contractor Shall assure that this has been accomplished by the forging source and shall submit certified documentation of accomplishment to the Government.</p> <p>26. Forging Source, Control and Location of Dies:</p> <p>Forging Drawings: 3-41606-1F ABD 3-41605-11F.</p> <p>Die# : Unknown and 7874</p> <p>Control Of Forging Process: Northrop</p> <p>Location of Forging Dies:</p> <p>KROPP FORGE COMPANY 5301 W. Roosevelt Road CICERO, IL 60650-1273 PHONE: (708) 652-6691 CAGE: OBFN1</p> <p>27. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL ADVISE THE GOVERNMENT IN WRITING OF THE INTENT TO PROCURE NEW FORGING DIES AND THE PROPOSED FORGING SOURCE: THE CONTRACTOR SHALL NOT PROCEED TO OBTAIN NEW FORGING DIES WITHOUT THE EXPRESS WRITTEN CONSENT OF THE GOVERNMENT PROCURING ACTIVITY. THE GOVERNMENT SHALL HAVE UNLIMITED USE OF THE DIES DEVELOPED UNDER THIS CONTRACT. THE CONTRACTOR SHALL INFORM THE FORGING HOUSE IN WRITING, AT THE SAME TIME THE ORDER FOR THE DIES IS PLACED, THAT THE GOVERNMENT HAS UNLIMITED USE RIGHTS OF THE DIES AND FORWARD A COPY OF THIS LETTER TO THE GOVERNMENT CONTRACTING OFFICER.</p> | | |
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